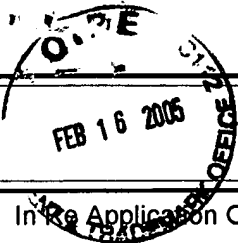


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 <b>TRANSMITTAL LETTER</b> <b>(General - Patent Pending)</b>	Docket No. <b>WSP204US</b>
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In Re Application Of: **Rainer Keifer**

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/069,636	August 5, 2002	Stephen M. Hepperle	24041	3753	3353

Title: **DISCHARGE VALVE FOR CO2 PRESSURE CYLINDERS**

COMMISSIONER FOR PATENTS:

Transmitted herewith is:

- 1) Reply Brief (in triplicate)
- 1) Certificate of Mailing by First Class Mail
- 1) Acknowledgement Postcard

in the above identified application.

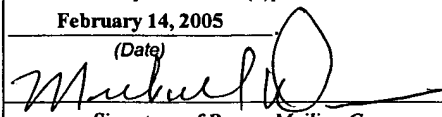
- ☒ No additional fee is required.
- ☐ A check in the amount of \_\_\_\_\_ is attached.
- ☒ The Director is hereby authorized to charge and credit Deposit Account No. **50-0822** as described below.
  - ☐ Charge the amount of \_\_\_\_\_
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- ☐ Payment by credit card. Form PTO-2038 is attached.

**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**

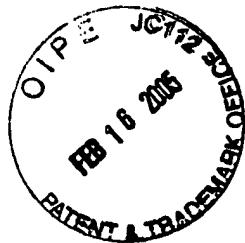
  
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Signature

Dated: **February 14, 2005**

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CC:



Attorney Docket No. WSP204US  
U.S. Patent Application No. 10/069,636  
Date: February 14, 2005

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Rainer Kiefer

U.S. Patent Application No. 10/069,636

For: DISCHARGE VALVE FOR CO<sub>2</sub> PRESSURE CYLINDERS

Filed: August 5, 2002

Examiner: Stephen M. Hepperle

Group Art Unit: 3753

Confirmation No.: 3353

Customer No.: 24041

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Michael L. Dunn  
Reg. No. 25330

**REPLY BRIEF**  
(37 CFR 1.193)

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Honorable Sir:

This is in reply to the Examiner's Answer of December 13, 2005.

In the Examiner's Answer, the Examiner has stated that he does not agree with the Appellant's statement that the claims "do not stand or fall together" because "reasons or arguments are not set forth to support patentability of each individual claim" and "Only a general statement mentioning some additional limitations without respect to specific claim numbers is

offered.” The Examiner is in error with respect to both of his proffered reasons. In the first place there is no requirement in the rules or anywhere else that support be given for “patentability of each individual claim” separately from the others. It is sufficient if only two claims are separately patentable to prevent all claims “standing or falling together. Further there is no requirement that claim numbers be set forth. Presenting arguments with respect to separate patentability setting forth separately claimed structure and giving reasons why the separately claimed structures are patentable is sufficient. Presumably the Examiner is capable of determining when specific named structure is in a particular claim.

In the brief the Appellant states “The claims do not stand or fall together. The subclaims further restrict the independent claims with patentably significant limitations. For example subclaims having restrictors with even higher pressure drops than 1 bar are even further removed from any suggestion in the prior art and a combination of such a restrictor with a by-pass check valve to prevent liquid from past the flow restrictor is a patentable distinction in its own right over and above the patentable distinctions already in claim 20. Further structurally significant differences for ease of sealing and assembly provide patentable distinctions in addition to those already in claim 20. Furthermore, the specific embodiments in the subclaims are specifically not described in the cited art. Additionally, all claims are not subject to the same rejections.

**STRUCTURAL DIFFERENCES BETWEEN THE CLAIMS ARE SPECIFICALLT SET FORTH. PATENTABLE SIGNIFICANCE OF THESE STRUCTURAL DIFFERENCES IS CLEARLY DISCUSSED. THE CLAIMS DO NOT STAND OR FALL TOGETHER !**

The Examiner has maintained all grounds of rejection on the same impermissible hindsight basis, i.e. that it would have been obvious in view of cited art to select a particular restrictor size to obtain a pressure drop of at least 1 bar. **Some reason must be suggested by the cited art for making such a selection. There is none.** As claimed, the restrictor causing the one bar drop is in series with a valve and the restrictor is sized so that the one bar drop is measured at a flow rate of 0.5 g/s of CO<sub>2</sub> at a temperature of 20°C. **Nothing of the kind is suggested by the cited art in any context.** As discussed ad nauseum in the specification, a one bar pressure drop, at 0.5 g/s of CO<sub>2</sub> at 20°C, is the drop required to prevent escape of liquid CO<sub>2</sub> through an open or broken valve. None of the cited references make any such suggestion. The Examiner, based upon hindsight, simply says, without support, that anyone could select the appropriate restrictor size to accomplish that goal. The Examiner says that a mere change in size will not provide the basis for patentability. That might be true where the change in size affords no unobvious result, but that is not the case here. The restrictor size provides the unobvious result of creating a pressure drop of at least 1 bar at a flow of 0.5 gallon per second of CO<sub>2</sub> at a temperature of 20°C in series with a valve, which as discussed in the specification, prevents escape of liquid CO<sub>2</sub> through an open or broken valve. **The Examiner has cited absolutely nothing suggesting such a result or any reason for selecting an orifice in series with a valve small enough to provide such a result.**

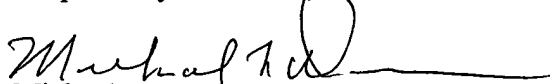
Based upon hindsight, without even citing supporting art, presumably based upon official notice of common knowledge, the Examiner has attempted to combine refrigeration systems with the cited art, saying “all mechanical refrigeration and air conditioners have used the same

principle for about a hundred years.” In the first place, the attorney for the Appellant does not accept the Examiner’s version of common knowledge. Use of CO<sub>2</sub> as a refrigerant in a mechanical system is rare if existent. Normal refrigerants are ammonia or halogenated hydrocarbons, not CO<sub>2</sub>. Additionally, orifice size for ammonia or halogenated hydrocarbons would be different than for CO<sub>2</sub>. Further, refrigerators normally run colder than 20°C and it would be a very large refrigerator indeed that put a half gallon per second through an orifice. **Even further, no reason is suggested why a refrigeration orifice should be used in series with a valve.** Further, all of the Examiner’s hindsight discussion with respect to refrigerators is entirely improper. **As previously mentioned, the Appellant does not accept the Examiner’s version of common knowledge and requires either his personal affidavit or appropriate cited art.** Additionally, the raising of the argument for the first time in an Examiner’s Answer is an impermissible new issue in the Examiner’s Answer.

Conclusion

In view of the foregoing, it is clear that the pending claims are patentable over the cited prior art. Reversal of the Examiner and allowance of all claims are therefore respectfully requested.

Respectfully submitted,



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Dated: February 14, 2005  
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